Design

THE MONTHLY JOURNAL FOR MANUFACTURERS AND DESIGNERS

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Number 28 : April 1951

THE COUNCIL OF INDUSTRIAL DESIGN : PRICE TWO SHILLINGS

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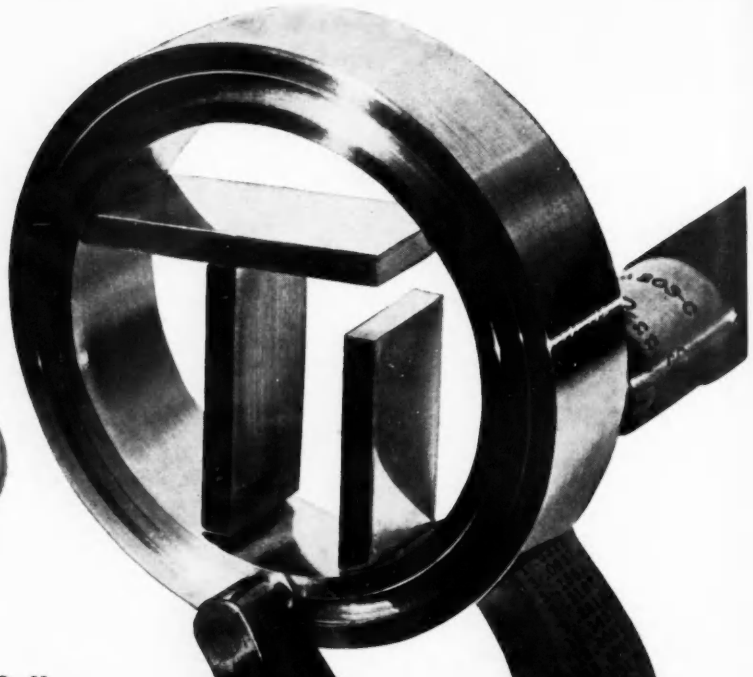

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Number 28 : April 1951

Design

THE MONTHLY JOURNAL FOR MANUFACTURERS AND DESIGNERS

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COVER PHOTOGRAPH: The Nuffield Universal *M4* tractor. This post-war design, in its farm-cart colour scheme of bright orange-red, is already familiar among the numerous tractors in use on British farms. The four-wheeled model illustrated has a front axle which is interchangeable with the three-wheeler shown on p 2. A rubber-mounted adjustable seat lessens the driver's fatigue during, *e.g.*, a day's disc-harrowing. *Photograph by The Nuffield Organization, Films and Photos. Section*

'Our dear mistake of watertighting'

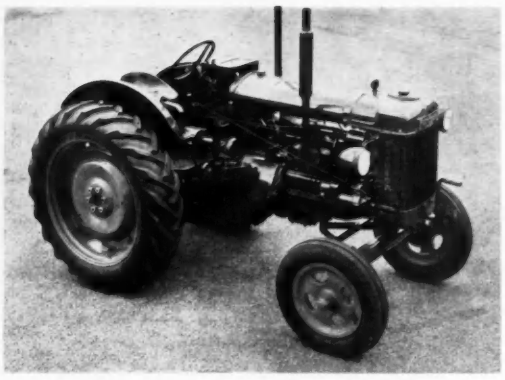
THERE ARE MANY niggers hiding in the woodpile of British design. From time to time we have been able to catch one or another by the toe. A well-fed one is the fellow who puts on borrowed finery, who, in the words of a Victorian critic, "borrows ornaments expressive of lofty associations and applies them to mean objects." Another, who seems at last to be losing his grip, is the timid type who believes that nothing that is not old can be beautiful. Then we have the nimble one who climbs on any band-wagon just to be in the fashion, whether or not he has any feeling for the new forms or any understanding why they have come about. There are many others, but the most elusive customer is the one who keeps himself to himself, who goes his own honest way oblivious of outside influences, producing his designs without regard for their context or for the many other materials and goods with which they will inevitably come into contact.

This failing has been common to many industries for several generations. W. R. Lethaby called it "our dear mistake of watertighting." Manufacturers who should be concerting their design policies have for years been working in separate compartments, ignoring the common goal of achieving a contemporary style or standard to match the great periods of the past.

It was with this in mind that the Council of Industrial Design, through the determined energy of its Chief Industrial Officer, Mark Hartland Thomas, called together the Festival Pattern Group, the story of which has been released this month. The idea of adapting crystal structure diagrams for decorative purposes arose from a lecture by a Cambridge scientist who suggested that they might make interesting textile patterns. Mr Hartland Thomas saw wider implications in them than this.

Realising the revived popular interest in pattern and decoration, believing, too, that a departure from conventional motifs might be refreshing, but above all recognising the need for common study of design problems by the many industries serving the home, he invited 26 representative firms to join the Festival Pattern Group to develop crystal structure diagrams into decorative patterns for textiles, pottery, floor coverings, dress fabrics, lace and plastics.

The results of this initiative will be fully illustrated in the May issue of DESIGN. They will also be seen in the Regatta Restaurant in the Festival South Bank Exhibition. P. R.



THE FORDSON MAJOR *is the most widely used tractor in Britain. Many implement-makers have designed equipment for use with it. Farm tractors must be rugged in construction. Will future models look as rugged as this?*

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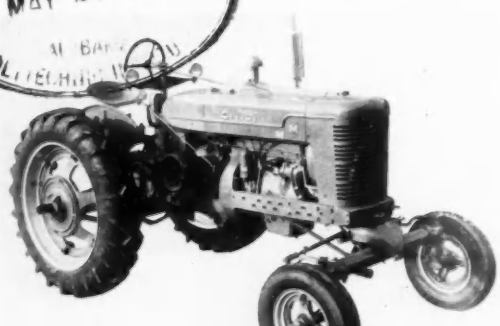
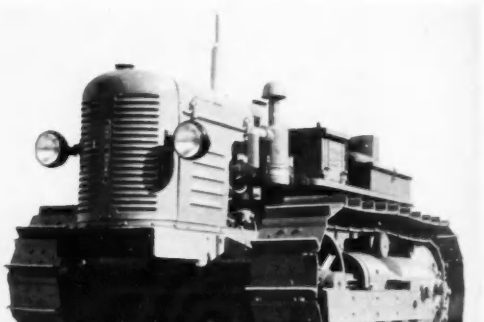
THE NUFFIELD TRACTOR *is a post-war design, in production since 1948. It can be changed over from three-wheeler to four-wheeler on the farm—in half-an-hour, it is claimed. The three-wheeled version is for row-crop work*



INTERNATIONAL HARVESTER'S *first Farmall tractor was built in 1923. Raymond Loewy Associates have had a hand in the design of recent models. The type of Farmall illustrated above is now built in Britain, at International Harvester's Doncaster factory*



IN THE PAST, *most tracked (crawler) tractors used for heavy work in this country have been of American origin. This newcomer is British—the diesel-engined David Brown* Track-master. *So, too, is the Fowler Mark VF (page 5). Other newcomers are the Fiat (Italian) and Hanomag (German)*

"The greatest change has been the replacement of the horse by the farm tractor." The two mowers illustrated here are both of Massey-Harris design: the newer model takes its power from a rearward extension of the tractor's driving shaft

Power on the Land

A survey by W. H. Cashmore, BA, NDA,
Director, National Institute of Agricultural Engineering

OVER THE PAST 50 years, Britain has seen many changes in design and use of farm machinery. Two world wars have had a decided influence on the pace of mechanisation, even though the land is still managed on long-established farming principles.

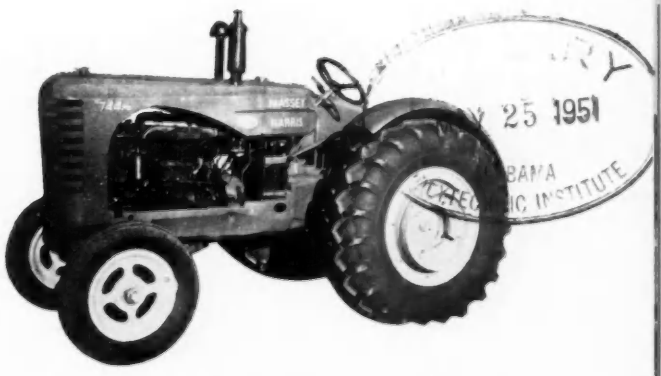
The greatest change has been the replacement of the horse by the farm tractor as the source of power. The farm-horse population, which once exceeded 1,000,000, is now below 400,000, while the number of farm tractors has reached a total of 300,000. The main advantage of the tractor over the horse is that by its increased rate of work, and by the fact that it is not subject to fatigue, it enables one man to carry out much more work. It also enables a higher proportion of land to be brought under cash crops, as it frees for this purpose the three to four acres of land previously reserved to grow the horses' food. This may contribute to the marked increase in acreage of such cash crops as sugar beet and peas now grown in this country, and to the increase in vegetable and fruit production.

A further advantage, in these days of labour shortage, is that the task of servicing the tractor is far less arduous and far less time-consuming than the maintenance of horses.

At first, the machinery used with farm tractors was of the horse-drawn type, with modified hitches. The early tractors were on steel wheels; it was not until pneumatic tyres were adopted, in the early 'thirties, that the tractor really came into its own. The pneumatic tyre made it possible to work on the land at speeds up to five miles an hour, and to use tractors for transport on any road. At this point it was realised that the tractor might be a complete substitute for the horse; subsequently, it has become more versatile. Implements have been redesigned to embody such innovations as grease-gun lubrication, and improved bearings to withstand greater speeds.

The next important stage was the introduction of the mounted-implement principle, and the use of hydraulic control of such implements, which is now standard. This has resulted in simpler design and better control.

In recent years, machinery design in Britain has become more specialised in an effort to remove peak labour demands previously met by using casual labour. The new machines either combine two or more operations or introduce entirely new techniques. For instance, the combined harvester-thresher, which both cuts and threshes corn, eliminates the need for casual labour during harvest. Sugar beet harvesters remove the tops, lift and clean the beet, and deliver them into trailers; potato harvesters, in one operation, lift and deliver potatoes, free from soil, into a trailer; hop-picking machines considerably reduce the labour associated with hand-work. Spraying and dusting machines used in the control of plant diseases and



ANGLO-CANADIAN: *The Massey-Harris 744 D tractor, built at Kilmarnock, uses the same frame and transmission as the Canadian Massey-Harris model, but it is fitted with a 42 h.p. Perkins (British) diesel engine and other British components*

insect pests, milking machines, and other equipment for stock farming, are other recent developments.

Improved design has made it possible to reduce considerably the weight of implements, a point which is most important when they are mounted on the tractor. The trend is away from the standard rolled sections and iron castings which were once a feature of farm machinery. Constructional methods developed in other branches of engineering production are now employed; modern welding technique has reduced the need for heavy castings, weight has been further reduced by employing pressings, tubular structure, and higher quality materials such as light steel castings instead of cast iron.

Considerable attention has also been given to the appearance of farm machinery; given equal performance, preference is shown for the machine with the best appearance. Designers have taken advantage of changes in construction to achieve cleaner lines. Sheet metal is used to give protection against dust, dirt and the weather, but not for "streamlining," a practice which has little appeal in agriculture. The better paint finish now available in industry is being used by manufacturers of farm machinery, and it has been proved that this reduces rust and appreciably prolongs the life of the implement.

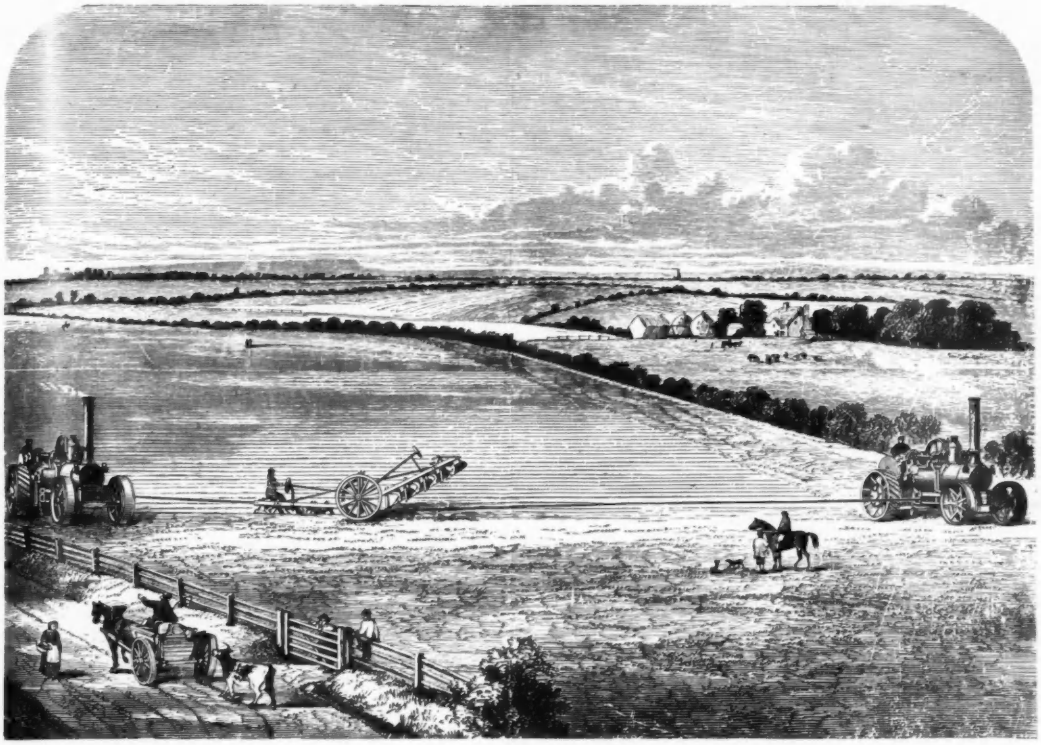
The primary reason for painting farm implements is to protect them against the weather, and the bright colours which are usual may perhaps be attributed to the traditional farm-cart colour schemes. Thomas Hardy, writing in *The Mayor of Casterbridge* about Dorchester in the mid-nineteenth century, described the arrival there of a horse-drill "painted in bright hues of green, yellow and red," so gay that Lucetta, his lady of fashion, "alone rivalled it in colour." It may well be that in the early days the more effective anti-corrosive paints were associated with bright colours: even today, when suitable paints are available in almost any colour, the precedent set by the older-established manufacturers is still generally followed.

Moreover, the farming public has become accustomed to associate a colour with a particular make: so much so that, almost without exception, manufacturers have adopted particular colour schemes as their own. The days when a manufacturer catered only for local markets have passed, and easy recognition of a house colour is an important factor in good publicity—especially now there is a close link between manufacturers of tractors and of their associated implements, individual implements giving way in importance to a farming technique.

Also, bright colours are often helpful in farm organisation. Many farming operations depend on a well-planned link-up of field work, transport and storage at the homestead, and it is often of great advantage to be able to recognise an implement at a distance. Farming itself is of course associated with bright colours; drab-coloured equipment is out of

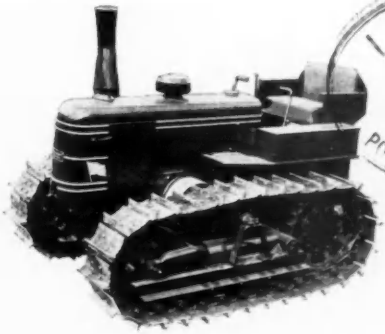
DESIGN DEVELOPMENT 1: *The Massey-Harris combine harvester-threshers of the* 1930's *were tractor-drawn. From them the more compact self-propelled models shown on right have been evolved . . .*

In 1940–41 *this self-propelled combine was produced. The power provided was exactly right for the job: the operator had a clear view of the work before him—among other advantages of the new design*



JUGGERNAUTS OF THE FARM, *the steam cultivating sets of last century marked the beginning of mechanisation in British agriculture. Implements were drawn to and fro by steel cables between two steam-engines at opposite sides of the field. The illustration above is from an early Fowler catalogue*

Designed for use on British farms generally, this latest Massey-Harris combine is small enough to pass through a 10-foot gateway. Width of cut has been reduced from 12 ft to 8½ ft. The engine is a 6-cylinder Austin, petrol-driven



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*To be regarded, perhaps, as the modern equivalent of the old agricultural traction engines above, this new crawler tractor is made—*as they *were—by Fowler of Leeds (now associated with another old established agricultural machinery maker, Marshall of Gainsborough). The main achievement of the modern tractor is that it has brought mechanical power to the smaller farms; but heavy soil and large farms still provide a specialised market for the heavier models, such as this*

MOBILE ELEVATOR

SACK STACKER

CROP CUTTER AND LIFTER

CROP LOADER

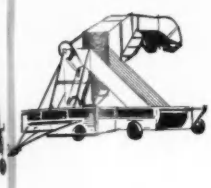
GRASS

MAY 25 1951

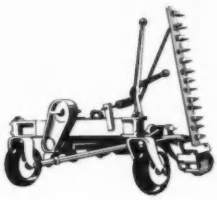
place in the varied colours of spring and summer, while in the autumn and winter a brightly coloured tractor and implement may help to give the operator a sense of well-being.

Plastics are beginning to play an important part, either in the form of sprays or as surface layers on vulnerable parts, in improving resistance to corrosion.

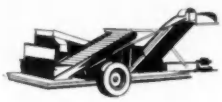
DESIGN DEVELOPMENT 2: *The mounted-implement principle is applied to the needs of the market gardener in the Barford* Atom *tractor (left). Features of the latest* Atom *(lower picture) include (a) larger wheels, improving ground clearance and traction, (b) increased power, 1½ h.p., (c) all controls mounted on handlebars, away from mud and oil, (d) tool-box placed nearer the centre of gravity. Implements which can be used with the* Atom *include a plough, cultivator frame, grass-cutter, lawn-mower, and the new disc harrow below. The discs are 10 in. in diameter. For deep penetration, weights are added over the harrow: they are designed for good casting, and the tapered edges make them easy to lift. Wheel weights, of smooth contour, improve adhesion*



GRASS HARVESTER



GRASS MOWER



POTATO HARVESTER

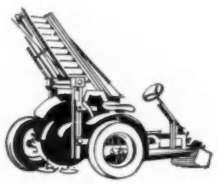
POTATO DIGGER

Although the machines used in Britain today are more specialised, cover a wider range, and are built in sizes to suit the power of the tractor, many of the component parts are basically the same as those established many years ago. Thus the knotter on the binder, the reciprocating cutter-bar, and the plough mouldboard still predominate in spite of attempts to find better principles.

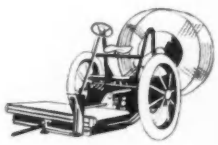
Most farm machines nowadays are subjected to extensive tests at the prototype stage, before design is finalised, and efficiency and reliability are steadily being improved.

The line drawings above and on right are reproduced by courtesy of the Renold and Coventry Chain Co Ltd.

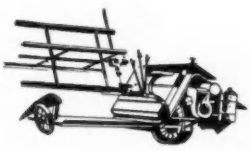
Illustrations and captions accompanying this article are an editorial selection. Other tractors which have been illustrated in DESIGN *include the Ferguson (No. 4 p 23), Energic (No. 7 p 13), Cockshutt (No. 14 p 17) and Bristol (No. 22 p 21)*



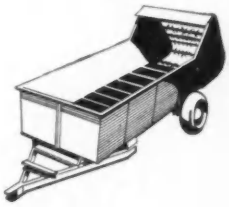
SUGAR-BEET TOP-SAVER



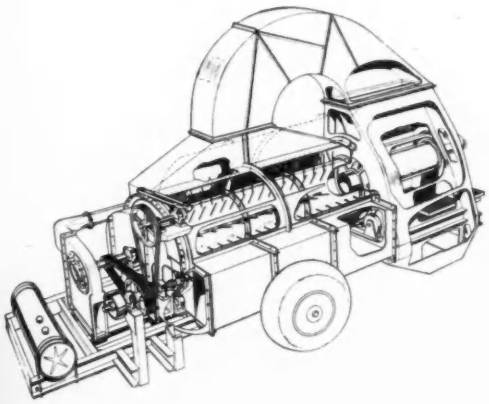
SUGAR-BEET HARVESTER



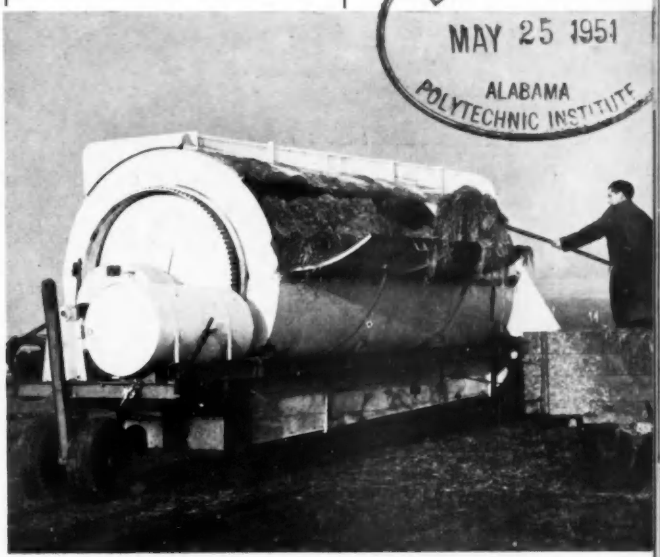
ENGINE-DRIVEN BINDER



MANURE SPREADER



DESIGN DEVELOPMENT 3: *A reminder of the interdependence of design, the* TL *drier for winter feeding-stuffs employs an oil burner of the type used in aircraft gas-turbine engines. A prototype is shown above, production model on right. Construction has been simplified, though appearance still leaves something to be desired. The crop is carried round on spring-loaded tines between a rotating and a stationary drum. Designed by Tiltman Langley Laboratories Ltd, marketed by McCall and Co Ltd*



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DESIGNERS represented on this page are: above, Thomas Eckersley, *British Sailors* (top left); Denison Hunt, *Drinking Songs* and *Country Dances*; Eckersley, *British Soldiers*; on extreme left, Pauline Baynes, *Farm Life*; left, Thomas Eckersley, *Animals*. Their designs are used on a variety of oval and oblong trays as well as the round trays and cake-plate illustrated; all these have been designed, as to shape, by Gaby Schreiber, FSIA

FIVE DESIGNERS . . .

and a new technique of decoration

FEW MANUFACTURERS of Festival souvenirs have shown greater awareness of the selling value of design than Runcolite Ltd.

Already using the services of Gaby Schreiber, FSIA, as consultant designer, they discussed with her the possibility of commissioning a number of well-known designers to produce pictorial decorations for use on trays and cake-plates in a variety of shapes designed by Mrs Schreiber. From the range which eventually resulted from these discussions, 10 designs were selected: most of them are illustrated here. They are the work of five designers—all of them Fellows, Members or Licentiates of the Society of Industrial Artists:

Pauline Baynes, LSIA;
Gordon Burrows, MSIA;
Gordon Cullen, MSIA;
Thomas Eckersley, OBE, FSIA;
Denison Hunt, MSIA.

While anyone who has seen any quantity of Festival souvenirs will realise that the Runcolite designs are well above the general standard aesthetically, they are interesting also for technical reasons, since they employ the *de Vere* process of decoration, which Runcolite Ltd have recently introduced (and their associate, Ashdowns Ltd, have patented). This process was described, on its introduction a few months ago, as opening up, for plastics, "many of the decorative possibilities hitherto associated only with china or pottery" (*British Trade Journal*, November 1950).

Designs which are to be used in this process are prepared in the normal way for lithographic reproduction, and litho plates are then made from them. From these plates, they are printed on a special kind of paper which is subsequently impregnated with urea resins. In this form they are ready for use as inlays; the curing cycle of the mouldings in which they are to be incorporated is interrupted and they are fitted into the moulding tool. Subsequently, curing is resumed; by the time it is completed, the inlays have become an integral part of the mouldings, and they cannot be removed by heat or friction. The effect is roughly comparable to that of underglaze decoration on pottery; indeed, the term "underglaze" has been used to describe it.

Some of the more colourful designs in the Runcolite range of 1951 Souvenirs, decorated by this process, are illustrated opposite. Others, less colourful but no less attractive, include a decorative design of Nelson and the *Victory* by Gordon Burrows, and two architectural drawings by Gordon Cullen—one of the old York Watergate (opposite the site of the South Bank Exhibition); the other, of Temple Bar. In both of these designs, the firm line of Cullen's drawing is complemented by subtle and restrained colouring.

"TEMPLE BAR"—a landmark of old London which is still remembered with affection—is the subject of the Souvenir design illustrated here. It is one of two architectural drawings by Gordon Cullen referred to above

1: These art schools take design seriously

Kitchen tools designed and made by Robert Dunbar, Chouinard Art Institute student

The design of this gas cooker—realised in model form—was an ambitious project tackled by a team of students at the Art Center School, Los Angeles. The industry's production methods were borne in mind throughout, and in the course of the project the students went over a local factory to gain first-hand confirmation of their theoretical knowledge

HOW CAN technical and aesthetic training be combined in the education of the designer? This question was asked in our review of English art schools (DESIGN No 20) and it will no doubt be asked again. Meanwhile, the pictures with this article, which come from Los Angeles, show how far some of the American art schools have moved towards reaching a solution.

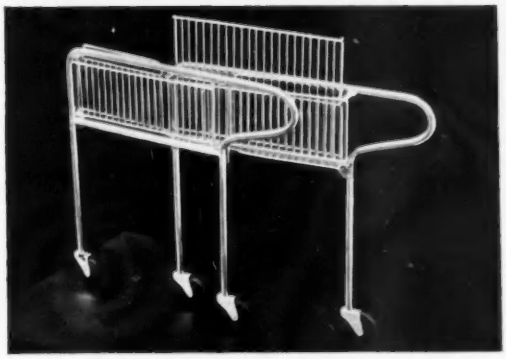
The students of the Chouinard Art Institute under Hudson Roysher receive a basic training in drawing, abstract design, colour, model-making, lettering and rendering as well as a practical introduction to industrial materials, methods and processes. During their course they are set industrial design problems which are carried through the following stages:

1. Analytical study of the problem;
2. Preparation of "idea sketches";
3. Scale drawings and clay studies; and
4. Scale models or renderings.

The mock-ups illustrated, made by the students themselves, suggest a high technical standard.

The gas-stove comes from the Art Center School, where a team of 10 students under John Coleman tackled this project, keeping as closely as possible to the methods of production used in large manufacturing concerns. Early in the assignment the group went over a local factory for research purposes. When the design had been approved, they first made a clay model, then a plaster cast, and completed their surface development drawings, with specifications. All engineering requirements were met—including the 50-odd requirements needed to obtain a performance certificate from the American Gas Association. The

Collapsible grocery cart for use in self-service stores; made in steel rod and tubing; designed to fold flat, reducing space needed for storage. By a student of the Chouinard Art Institute, Los Angeles



plaster model was then completed down to such details as gas taps, door handles, and a dummy clock and automatic timer.

A further indication of American interest in industrial-design training was the one-month course on Product Design sponsored by the engineering university of Lehigh together with the American Society of Industrial Designers, and held in Pennsylvania in the summer of 1950. Supported by many well-known manufacturers, this course provided an opportunity for manufacturers and designers to discuss their work and to attend lectures and demonstrations. Its aim was not to train designers but "to prepare men . . . to initiate and administer product design projects."

According to a first-hand account published in the SIA *Journal*, No 19, "people, who in everyday life hardly ever meet, came together to study, and to discuss industrial design, in the informal atmosphere of the 'campus.' Chief engineers, designers, together with production and sales people attended, armed with blueprints, case histories, models and finished products, supported by every possible form of visual aid."

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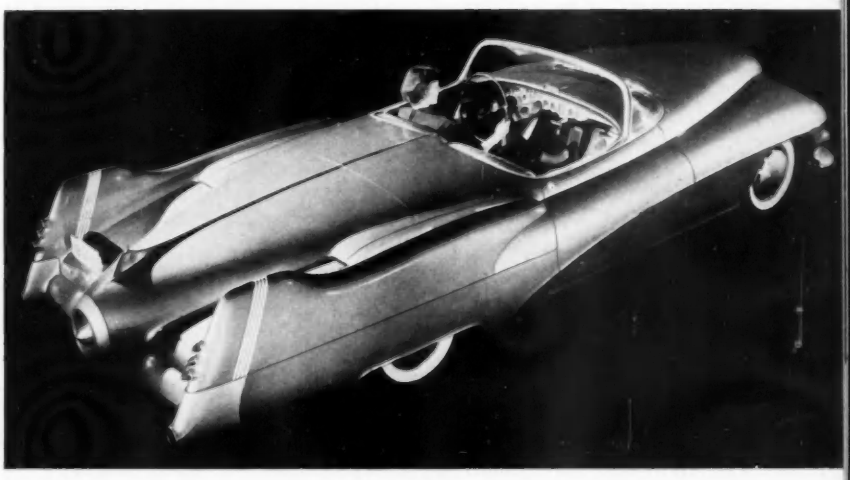
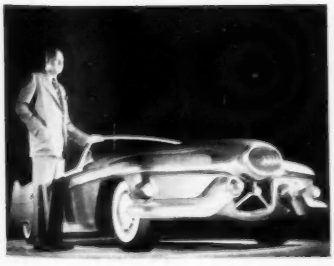
2: General Motors display their car of 1960—in 1951

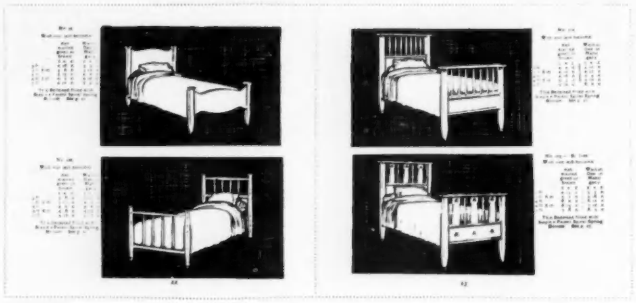
THIS IS General Motors' 1960 two-seater—three inches lower than a small MG, but 9¾ inches longer than a Humber Super Snipe limousine. Parking spaces in 1960 would need to be more spacious than today!

Whether the design goes into production or not, it has been outstandingly successful as a publicity stunt; among its many Press notices see, for example, articles in *The Motor*, 3 January, and *Life*, International Edition, 15 January.

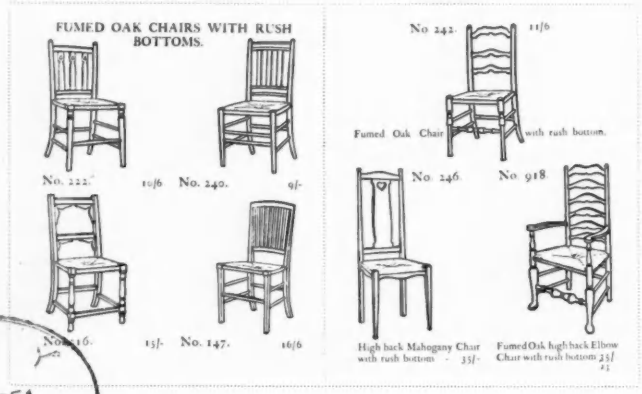
Harley J. Earl, General Motors' vice-president in charge of styling, with his experimental 16½-footer. A 300 h.p. V-8 engine is fed from twin fuel tanks in the rear fins. Windows and convertible top rise automatically if raindrops fall on a sensitised spot between the seats. Extensive use of aluminium and magnesium alloys keeps the weight down







"New Hygienic Wood Bedsteads" designed by Ambrose Heal and illustrated in his firm's catalogue of 1898. *His ability as a patron of design—as well as a designer—was already evident: the sketches were made by C. H. B. Quennell; the booklet included an essay by Gleeson White, first editor of* The Studio*; and it was printed at the Chiswick Press (Charles Whittingham and Co)*


FUMED OAK CHAIRS WITH RUSH BOTTOMS.
No. 242. 11/6
Fumed Oak Chair with rush bottom.
No. 222. 10/6
No. 240. 9/-
No. 246.
No. 918.
No. 216. 15/-
No. 147. 16/6
High back Mahogany Chair with rush bottom - 35/-
Fumed Oak high back Elbow Chair with rush bottom 25/-

MAY 25 1951

1899: *The woodcuts were made by the Guild Press, Birmingham, who also printed the catalogue. Note chair prices—from* 9s

1907: *Ambrose Heal had chosen "the difficult path of making his shop a place of pilgrimage for all who cared for good design." This writing table in English walnut was designed and made in* 1907 *for his own house at Pinner, Middlesex. Since then, the firm has made and sold many other tables of similar design—for "he proved a very successful shopkeeper too"*

PATRONS OF DESIG

Specially contributed

1900: *The dressing table above, made in oak with inlays of ebony and pewter, represented Heal's at the Paris Exhibition of* 1900

Sir Ambrose Heal

Portrait of a patron who is also a distinguished designer

THREE GENERATIONS of Heals had already devoted themselves to the family bedding business in Tottenham Court Road, when Ambrose Heal was born, 80 years ago, and it seemed probable that the fourth would follow in their footsteps. And so, happily, he did. In Ambrose Heal, the capable shrewd man of affairs is nicely blended with the far-seeing idealist, who has stuck to his guns come what may. The sensitive face, searching blue eyes and long grey hair of today against the rough tweed and soft handwoven tie proclaim the artist-craftsman.

After Marlborough—where in William Morris's school he perhaps first heard of the man who was to influence his life so powerfully—Heal served a three-year apprenticeship to a cabinet-maker in Warwick. Then he was sent to learn something of West End retailing in an Oxford Street shop. In 1893 he entered the family firm, which was run on patriarchal lines. Behind the Tottenham Court Road front there was still the old farm house where Heal's widowed great-grandmother had brought up her children and managed the business founded by their father in 1810. "She was a capable old lady," says her descendant. The family had moved long before Heal was born, but the house remained as lodgings for employees, and until it was pulled down in 1913 the partners in the firm lunched there regularly.

Ambrose Heal became a partner in 1898. The young man had become deeply interested in the Arts and Crafts movement, he knew many of its leading personalities and his work at the bench had given him a feeling for quality in his finger-tips. His strong crusading streak was aroused to revolt against the prevailing ugliness. His common sense sought a practical plan. He persuaded the firm to introduce "New Hygienic Wood Bedsteads" in place of the all-pervading brass beds of the day, and to match them with simple bedroom furniture in fumed oak instead of the fashionable polished mahogany. This furniture Heal designed and if you ask "How good was it?" it is only necessary to say "Go and look at it yourself—after half a century it is still worth looking at!"

To launch such a scheme needed courage, a great deal of courage. On the one hand, Heal was accused by some members of the Arts and Crafts Movement

LIBRARY
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TECHNI INSTITUTE

In making and selling simple furniture in light oak, Heal's were undoubtedly pioneers

1924: *Designed by Ambrose Heal, this mahogany wireless cabinet, inlaid with various woods and mother-of-pearl, was made in the firm's workshops for presentation to King George V by the British Broadcasting Corporation*

of prostituting the work of the craftsman; he was accused by some craftsmen, who had no knowledge whatever of the cost of retailing, of profiteering; and the furniture trade at large, which knew nothing of the Arts and Crafts Movement and cared less about it, looked upon him as a dewy-eyed visionary who would learn sense in time by bitter experience. And he had to convert shopmen who had long been employed by the firm. Heal could so easily have done the normal thing. He could have made a fortune by selling furnishings of the ordinary commercial kind and on this he could have filled his own house with the things he loved. With his eyes open, he chose the far more difficult path of making his shop a place of pilgrimage for all who cared for good design. And he proved a very successful shopkeeper too!

He is the sole example of that time in his trade in England of a man who acted on the assumption that the Arts and Crafts Movement might also become a catalyst to improve the standard of machine production, and he put his ideas in practice long before the *Werkbund* was set up in Germany. He was one of the very few people who saw the problem whole. He saw so clearly that you cannot just set out to sell better-designed furniture: you must inevitably consider the architectural quality of the shop you sell it in, and the calligraphy of the tickets you place in front of it, and the textiles, crockery, light fittings and whatnot you sell with it. Such matters show plainly how much one cares, and in such matters Ambrose Heal

Heal dining table with underframe of anodised aluminium; walnut top veneered in rectangles

This sideboard (1929) is more typical of his style: less cottage-y, but no less expressive of the "feeling for quality in his finger-tips" than pieces designed thirty years earlier

was not found wanting. His criticism was always well worth listening to, and his judgments were enforced. In building the new Heal's he, now become managing director and chairman, showed his interest in, and wide knowledge of, architecture by appointing a promising young architect, Cecil Brewer. The Mansard Gallery in the new building has staged a wide variety of interesting exhibitions.

Heal is a collector of fine printed books and a well-known authority on *London Tradesmen's Cards of the Eighteenth Century* and *Signboards of Old London Shops*. On both subjects he has written standard books, as well as one on *The English Writing Masters and their Copy Books*, and *The London Goldsmiths*. As a Fellow of the Society of Antiquaries, he might well have felt that to share his research work with his fellow antiquaries was adequate. But Heal has never lived his life in such watertight compartments. His research was not only justified in its own right: it was of practical use too; it led to better notices in Heal's windows and advertising, and so incidentally to better lettering in shops up and down the country. Heal's dislike of public speaking, and indeed of any personal publicity, caused him to refuse office on many occasions. He was an early member of the Artworkers' Guild and a founder member of the Design and Industries Association when it was set up in 1915, was knighted in 1933 and was elected a member of the Faculty of Royal Designers for Industry (RDI) in 1939. He continued to design furniture of sturdy character and even a wireless cabinet for the King. At one time he experimented with tubular steel furniture, but one feels his heart was not in it. He is a worker in wood, not an engineer.

Bookcase of approximately the same date as the wireless cabinet, opposite

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POLYTECHNIC INSTITUTE

How can such a strong and virile personality, whose prolific work covers the whole span which has seen the introduction of machinery into cabinet-making, hand on his exceptional experience? Load-shedding does not come easily to him.

His two sons, Anthony and Christopher, have followed the Heal tradition of mastering both practical and theoretical work, and know how rare is taste combined with enthusiasm in retailing. Heal's remains a highly individual shop. But in our restricted days it is not possible for them to roam the world in search of good things for it, as their father did before them—and that is a great loss to them, and to us. Yet to those privileged to know him, Sir Ambrose Heal, for all his years, still stands for Heal's, the family business which five generations have built up on the same piece of ground.

Like father, like son: much of Heal's present-day furniture—including this dining room suite, which comes into the Utility price range—is designed by Christopher Heal, MSIA

Furnishing the Civil Service

Efficiency in use and ease of maintenance were guiding factors in the design of new office furniture by the Ministry of Works

by Michael Sheridan

1951

"RE-FURNISHING the Civil Service to modern standards" is a task to daunt the stoutest heart, but that is exactly what a report* on working conditions in Government offices set in train in 1947. Considering that for eight years the standard equipment of the Civil Service—"emergency furniture" it was called—was the multi-purpose folding table and chair that became as familiar a sight in field headquarters as in food office or Labour Exchange at home, the opinion that the conditions in which many Civil Servants work are unsatisfactory was probably typical British understatement.

The Ministry of Works, which is responsible for the design of every piece of furniture in Government departments, is — unlike the average commercial manufacturer whose responsibility may often be said to end with making and selling — in the delicate position of having to maintain the furniture produced to its designs as long as it will hold together. And since the Ministry is spending public money, there is always that perpetual horror of Government Departments, "a question in the House," in the background. This, allied to the fact that designers and users are part of the same team, was bound to produce interesting results.

Complete co-ordination between the furniture design department, the architects' department, Organisation and Methods officers (who are efficiency experts attached to each section), and the Accommodation Officer, whose job it is to see that the individual needs of his own department are efficiently met, has brought about a minor revolution in design of Government furniture and has, moreover, led to the replacement of an uneconomic multiplicity of pieces by a standard range.

It is true that specialised needs of certain departments must sometimes be met by "custom-made" furniture, but even here it has been found that effective liaison sometimes means that a modified version of some special piece of equipment demanded by two departments will serve both equally well.

"Liaison" may mean that designers spend days watching a particular office at work, and studying the processes carried out there. Users were brought into the picture at an early stage, when the Staff Side of the Whitley Council and representatives from other staff associations were invited to comment on a demonstration office furnished with prototypes. As a result, some modifications were made.

The nice distinction between furnishings for the different grades has been conscientiously observed within the standard range by using different timbers for different grades. Walnut ranks highest socially, with mahogany second best; oak is a poor relation, still on the first rungs of the social ladder.

The furniture department's complete programme is, of course, long-term—"it may take as long as 20 years"—and complete re-furnishing is being confined for the moment to new buildings. The first of these, the future home of the Board of Trade in Whitehall Gardens, now nearing completion and already occupied by some 250 Board employees, provides an opportunity to see the scheme in operation.

* *Working Conditions in the Civil Service.* Report by a Study Group appointed by HM Treasury (HMSO, 1947; price 4s).

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POLYTECHNIC INSTITUTE

Drawings on this page and on page 19 *by Peter Battersby* ARCA

The new standard occasional chair (left) for use in all rest-rooms and sick-bays in Civil Service departments and in Government hostels. Right, the new chair for visitors. " There was a time when politeness was thought to decree an informally low chair for visitors to executive ranks." This new design puts interviewer and interviewed on the same level

To eyes accustomed to the parish-room effect of walls green or chocolate below, cream above, the result is certainly striking enough. Blush pink brings a warm glow to north rooms, Adam green with pink ceilings adorns the east aspects, and grey the south. The design department, aware of the decorative desirability of plain carpets but dogged as ever by the maintenance problem, standardised a mottled design that makes a good compromise and will gradually replace the "practical" but busier patterns of pre-war.

Following complaints that the old standard leather-cloth made clothes shiny, it was decided to cover all chairs in fabric, mostly a heavy cotton rep. This innovation in itself promised a maintenance headache later, but the furniture section removed the difficulty by designing detachable upholstery. Drop-in seat covers, for example, are made with a perimeter draw-cord and are removable by loosening two trip knots.

The office bookcase in which half-a-dozen reference books fight for *lebensraum* with a motley assortment of loose papers, a ball of string, spare pair of gum boots, hand towel and half a tablet of soap, is a familiar sight

Executive office in the new Whitehall Gardens building of the Board of Trade. It shows new designs of desk, tables and working chairs, as well as the interview chair seen also in the line drawing above

25 1951
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CHNIC INSTITU

"The psychological need for spaciousness" is recognised in the equipment of the new Board of Trade file registry. Storage racks at the back of desks are low enough to give an uninterrupted view across the room

The design of these new metal units is a result of co-operation between the Furniture Design Department and Architects' Department of the Ministry of Works. Air withdrawn from the room circulates through them

The fact that many office bookcases are used for things other than books has received official recognition. Space with glazed doors is now supplemented by cupboard-space with wooden doors. (This photograph of a prototype was taken before full use was being made of either)

FURNISHING THE CIVIL SERVICE

continued from page 17

in commercial offices; but not in new offices of the Civil Service. A survey of the use of bookcases, and the number of reference books needed by officers of different grades, has produced a bookcase in which only a certain proportion is glazed; the rest is closed storage space.

Tidiness is encouraged by the design of several pieces of equipment: combined *In* and *Out* trays, and multi-space trays to fit in the middle of double-sided tables (with two trays facing one way and two the other) reduce desk clutter. An interesting feature of these trays, dictated by metal shortage, is the replacement of the metal card frame by a simple sinking in the wood itself, which materially contributes to the neatness of the fitting. Again, festoons of flex are eliminated by a channel cut in the base of desk and table pedestals through which they can all pass in a neat bunch.

The psychological need for spaciousness is for the first time recognised practically. Where racks for records are necessary at the back of desks, they are kept low enough to give a clear view of the rest of the room, additional racks being provided by floor pieces if needed.

There was a time when politeness was thought to

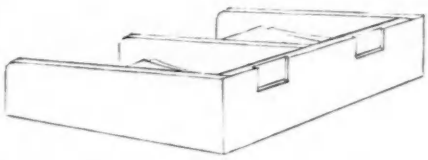
decree an informally low chair for visitors to executive ranks. Today, an equally comfortable but higher chair puts interviewer and interviewed on equal terms.

Co-operation with the architects' department has produced a metal unit—standard, at present, for the Whitehall Gardens building alone—which is designed to fit into bays in every office with the effect of a built-in fixture, forming an integral part of the air-conditioning system. There are two versions. One is a double cloaks-cupboard with loose ventilated hat racks, umbrella fittings and mirrors, providing for eight people. Projecting metal tongues inside the unit make it possible to reduce the depth by a false back, if all or half the cupboard is required for storage. Standard shelves can be fixed at different levels.

Air which is being withdrawn from the room passes through a louvre in the bottom of the door and rises through the cupboard, airing or drying outdoor clothes on its way, and disappearing through a soffit hole in the ceiling.

A second version of this unit, similar in basic dimensions but with four filing drawers below and a cupboard above, was designed after exhaustive surveys of the amount of paper-space required in each office.

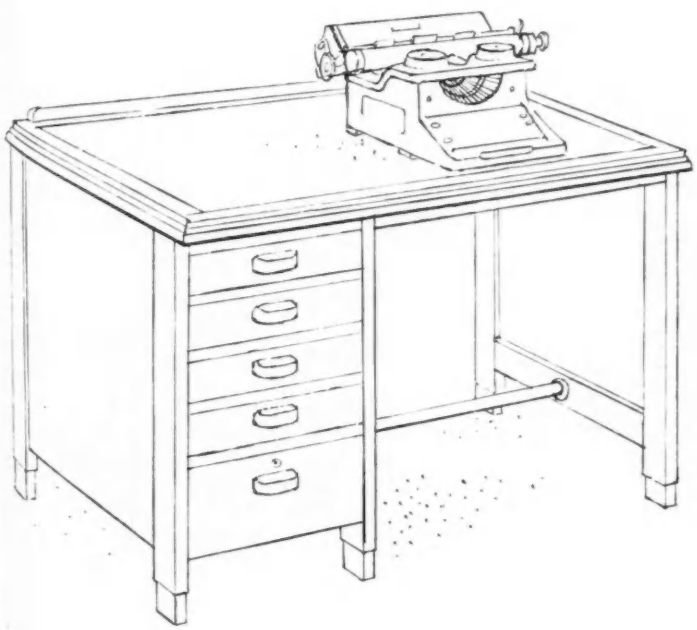
The Ministry of Works' designers are understandably non-committal about the future but they are committed to a programme of even closer collaboration with other departments. The next step, already at the discussion stage with H M Stationery Office, is the co-ordination of desk areas with sizes of blotting paper and other equipment.



This pair of trays has recesses in the wood, instead of metal frames, to hold *In* and *Out* cards

The new standard typist's desk has a metal tie-rail that serves a structural purpose and at the same time provides an unscratchable footrest. The shaped feet are hard to justify on practical or aesthetic grounds, unless it was intended to fit metal shoes. The moulding round desk top and the handles could be carried a stage further in refinement.

In the new office chairs, the seats are covered in fabric instead of leathercloth; the upholstery has a detachable cover for laundering

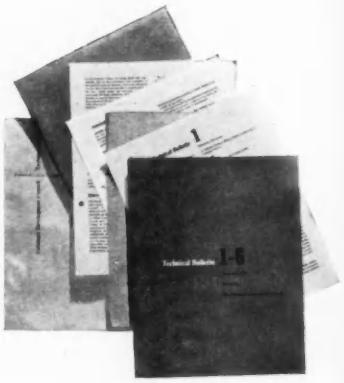


POLYTECHNIC

Can design cut printing costs?

by Henry D. Davy

Many people besides printers are worried by the rising costs of paper, printing and blockmaking. This article suggests that design can effect substantial economies if it is considered at the earliest stage *in the planning of a piece of print. Some of the author's recommendations may seem drastic, but, coming from a printer—Mr Davy is managing director of Doig Bros and Co Ltd, Newcastle-on-Tyne—they deserve consideration. In the following article they are summarised from an address which Mr Davy gave to the recent National Conference of Young Master Printers.*



Straightforward presentation of technical information distinguishes the loose-leaf *Technical Bulletin* of the Furniture Development Council. The cover holds six issues. Designer, Herbert Spencer, MSIA. Tea-chest type is used for the large numerals, Times Roman elsewhere

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MAY 25 1951
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IN PRINTING, as in most other industries, cost and design are closely tied together. For it is in design that costs are fixed and production snags are created; design, too, affects the capacity and speed of machines, the amount of make-ready needed, and even paper stocks, delivery dates and profits or losses.

The designer therefore should be the master mind behind the production of a piece of print; it is his job to plan the print to fit the purpose *and* the machine.

Because printing is a service industry and every piece of print has a definite job to do, it is especially important that the designer should be able to interpret the requirements of the job in relation to its purpose. The printer, as much as the advertising agent or the publisher, must understand the ultimate use of the work he produces; his policy to the customer should be to give not necessarily what he wants but what he needs. The printer should therefore get all the information he can about the job he is to print: the amount of use and handling it will have, whether it will be filed, and if so, where; the type of reader, and so on. It is no use, for example, designing a piece of selling publicity like a good-conduct prize to be handed out by a headmaster on speech day. Where a simple leaflet is required, lavish or elaborate design would be an example of *unfitness* for purpose.

Another way of cutting printing costs is to design for economy in production but this is, unfortunately, not as simple as it sounds. It has been calculated that a printing business employing 100 people handles about 3,000 jobs a year, each of them different in size, paper and setting. No printer can afford to maintain a design staff to keep that number of jobs under constant design control. The only solution to the problem, it seems, lies in some measure of standardisation.

Think of the different faces of type with their varying weights and sizes, the many different colours of printing inks, the tints, sizes and textures of papers, and remember that each and every job contains all these ingredients in varying proportions. The situation cries out for rationalisation.

I think it would be safe to assume that in many printing houses 50 per cent of the stock of type is used in only five per cent of the jobs done. While the logical conclusion is that it would be economically ideal to have just one face of type (which has in fact been done by one book-producing unit in America), I do not suggest anything so drastic; but I would recommend a reduction of the printer's range of types to those which are in general use. Outside that

The Knoll furniture catalogue is lavish even by American standards. (To the merely curious, it is *sold* at $3.50.) Most of its 80-odd pages, including those shown above, are in two colours. It is divided into sections by pages of thin board printed in solid colours. Designed by Herbert Matter. *Wire-o* binding. Page size 8½ × 12 in.

range, a trade typesetter can be employed. If you have eight type-faces—eight distinct notes like the octave on a piano, with their range of sizes and the diminuendo and crescendo of their italic and bold, you will have all that is required to produce beautiful typography. Colours of ink, too, can be limited and standardisation can be applied to paper by having a range of standard trimmed sizes within one's own plant. It can also be applied to layouts for publicity work without becoming monotonous. The high-quality magazines for women, which represent some of the finest layout work in the country, work to a standard format but there is never any danger of monotony in them.

Standardisation is more difficult for those who print to other people's design, but that is a case of educating one's customers. If the printer can show that it means reduction in cost and improvement in service they will take heed.

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POLYTECHNIC INSTITUTE

The new label (right) for Hall's Wine was prepared by its designer, R. H. Talmadge, MSIA, as the third stage of a redesign in three stages; but the clients liked it so much that they decided to skip the intermediate stages. Display value has been increased without any increase in the number of colours used in its printing

Case-history of a textile trade-mark

by E. Searle Austin

TO DESIGN A trade-mark which would have some association with the product and be recognisable by anybody of any race: this was the twofold problem set by a British textile manufacturer.

When Frymann and Fletcher Ltd, manufacturers of Milanese and novelty warp knitted fabrics, decided that they needed a new trade-mark they approached the Council of Industrial Design, whose Design Advice Section offers an introductory service to manufacturers in search of designers. On the Council's advice, Frymann and Fletcher got into touch with Edward Bishop, RBA, asking for the words "Fryma Fabrics" to be drawn in such a form that they could be used as a trade-mark in various ways. Among the uses listed were advertisements, display material, swing tickets for attaching to lengths of fabric, and clip tops.

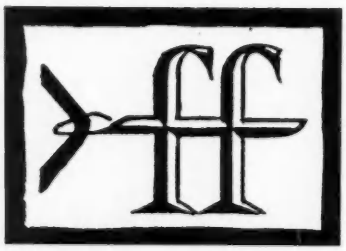
In his reply accepting the commission, Mr Bishop asked for more information about the previous use of the words "Fryma Fabrics," and inquired whether the firm had any associations from which a pictorial device could be evolved.

"If a large proportion of your sales are overseas," he added, "I strongly recommend to you the use of a symbol which can be recognised in any country, whatever the language, by all readers at all times."

Client and designer agreed that, while the mark must look modern, it must at the same time avoid any-

FRYMANN & FLETCHER LTD.
Clyde Works, Denman St., Nottingham
Every care is taken in the manufacture of this fabric to ensure the best possible workmanship, but some faults are quite unavoidable, and the manufacturers do not guarantee it to be perfect, nor hold themselves responsible for defects.
They are however desirous, without any prejudice to the above reservation, of making such allowance for defects as they may deem reasonable.
Frymann & Fletcher Ltd.
Clyde Works, Denman St.,
NOTTINGHAM
Fryma fabrics

Some of the ways in which the new trade-mark is used are illustrated here: on clip tops for patterns of material, on swing tickets for attaching to lengths of fabric, and on stationery. One of the features of this trade-mark is its adaptability to all purposes. It is suitable for reproduction in various sizes and because it is a symbolic design it can be used, if necessary, without the manufacturer's name



The old trade-mark (left), one of the experimental sketches, and (right) the design, based on a Milanese warp loop, finally adopted

thing that would date quickly. Another complication was that the trade-mark would often be attached to lengths of fabric handled through distributors who would object to the manufacturer's name appearing on it.

The client made specific suggestions for a device and Mr Bishop therefore started work on the theme of the double initial F of Frymann and Fletcher. In some of his later roughs the letters were formed of thread. Although this was not the final solution, it met with a sufficiently favourable reception to confirm the designer's feeling that he was on the right track; he soon came to the conclusion that a symbol formed of thread would be better than initials, and these were subsequently abandoned at a conference between the designer and the managing director of Frymann and Fletcher Ltd.

Edward Bishop then set about analysing material on which a purely symbolic design could be based. In the course of discussion he realised that amongst the stitches of which various fabrics were composed was one of outstanding interest, namely the Milanese warp stitch. This consists of a loop of cotton from which the two ends run at different angles. After much experiment Mr Bishop evolved a design which was, in effect, a magnified diagram of the Milanese warp loop, drawn in a heavy even white line on a black disc, the white ends of the loop bleeding off the edges of the disc. The aptness of this device, its adaptability to all purposes and to any size, together with its universal language, commended this design to the client. Further experiments were conducted to test the value of suggested alterations, but in the end the mark as originally planned was adopted.

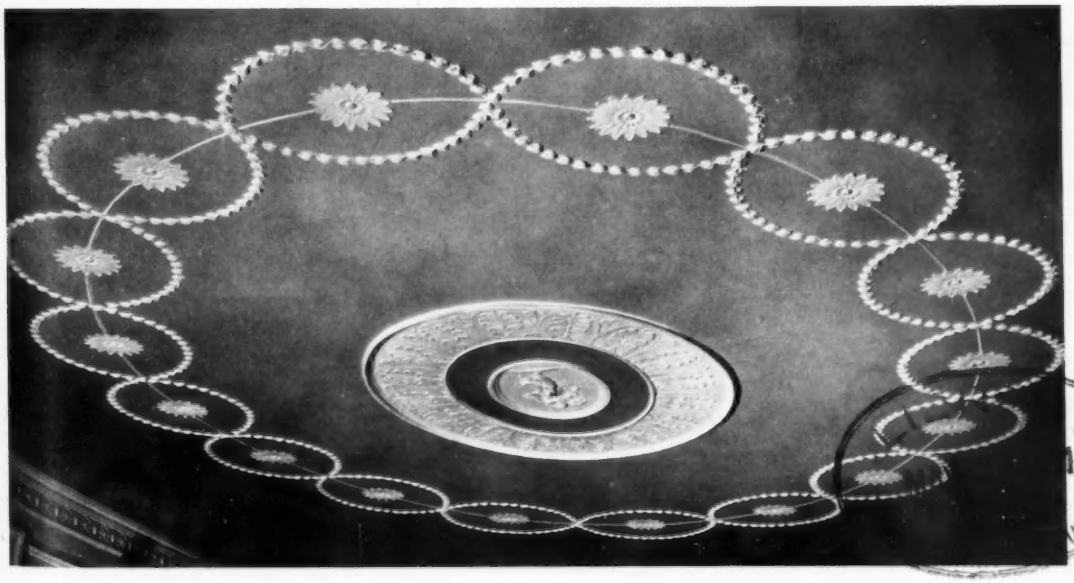
This case-history is notable not only for its successful outcome but for the complete objectivity of the client, who selected a designer logically, briefed him thoroughly, guided him wisely, accepted his considered advice, and finally (and unusually) refrained from meddling with a most distinctive design.

WHO WOULD DARE . . .

. . . TO INTRODUCE contemporary furniture into a room with this superb ceiling? And what would it look like if they did?

It would have been easy to say: "We will install furniture which copies the Adam style as closely as possible." But if Robert and James Adam had been content to copy *their* predecessors, there would have been no Adam style.

The opening questions are not rhetorical: they have an answer, and the answer is on page 33.



NEWS OF NEW PRODUCTS

MAY 25 1954
POLYTECHNIC

Loewy for luxury

ANNOUNCED AS "the most luxurious and most expensive of all gas cookers," the *Raymond* has more than snob-appeal to justify its £63. It is as full of design points as the resolutions of a Housewives' Forum. The plate rack folds down into the double-walled splash-back when not in use. The grill (seen below) is exceptionally large, incorporates its own drip- or crumb-tray, and can be used in the oven as a roasting tin. Any burner, or the grill, or the oven, is lighted by turning the appropriate tap and then pressing the tap on the extreme left, which is connected to a battery. The *Raymond* is made by General Gas Appliances Ltd, with Raymond Loewy as industrial designer (through the London office of Raymond Loewy Associates). Hence the name.

Temperature control

The Proscon room thermostat control is designed to be connected in series in the circuit of a heating system. It can be set to any desired temperature. The cover, seen above, is a moulding in wood-filled urea (by Litholite Insulators and St Albans Mouldings Ltd, Watford). The Proscon was designed by Scott-Ashford Associates in collaboration with the manufacturers, Process Control Gear Ltd, St Albans. Colours are mushroom grey for the moulding and matt silver for the dial, with degree marks in maroon. Size, $4\frac{5}{8} \times 2\frac{1}{4} \times 2\frac{3}{16}$ in.

Magazine table

This magazine table is a recent addition to the many examples of contemporary furniture marketed by Scottish Furniture Manufacturers Ltd. Designed by Neville Ward, B. Arch, ARIBA, and Frank Austin, FSIA, it is made of European beech and is so constructed that the two upright racks fold down and form a flat top if desired. The manufacturers are A. & W. Robertson, Glasgow.

Remington Rand filing shelf

This shelf is designed to speed-up filing by keeping the material at hand. It can be hooked on to any type of drawer handle. A clip holds the papers and there is a groove for pen or pencil. Finished in olive green or *Gray-Rite* (which has a higher value of light-reflection without glare); price 35*s*.

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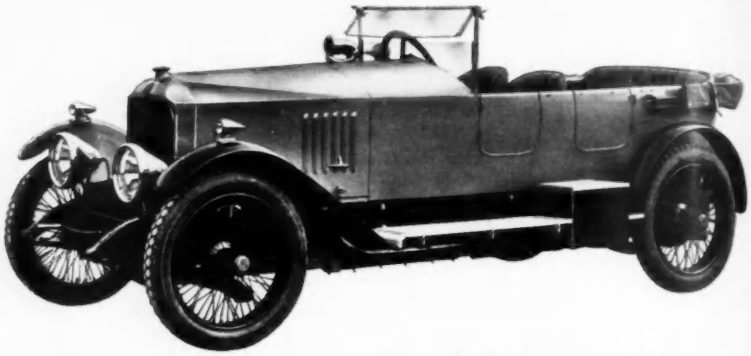
ALABAMA
POLYTECHNIC INSTITUTE

NEW BOOKS and technical publications

MAY 25 1951



The 30/98 Vauxhall of 1921, "which many regard as the most famous and historic sports car of all time." One of the many illustrations in Horseless Carriage *by L. T. C. Rolt, an historical account of the development of British cars, reviewed below*

Silk screen

Screen Process Printing 1951, edited by F. W. MACKENZIE, published by Skinner and Wilkinson (12*s* 6*d*); reviewed here by T. C. HART, printer

TO THE GENERAL public, silk-screen printing manifests itself most frequently in the form of advertisements on Underground escalators and trains. A minority will be aware of its adoption in fabric printing: examples have been reproduced in DESIGN, Nos. 20 and 25. Some industrial designers have used the process for the lettering and graduation of scales, or for decoration. *Dayglo* colours—of questionable virtue—have attracted recent attention to screen-printed posters filling the gap between the poster-writer and the lithographer.

The printer, whether letterpress or lithographic, has for a quarter of a century regarded screen printing as a competing process not to be taken too seriously, at best a cheap—and often nasty—substitute for the older, superior, processes.

To all classes of potential users, *Screen Process Printing 1951* will serve as an introdution to the present state of the industry, and to the expanding range of purposes to which the process can be put, often with economy as compared to other processes, sometimes with an excellence of result which other processes cannot achieve. More important, this book will help to avoid possible causes of waste and unsatisfactory reproduction (especially of lettering). It should also stimulate the backroom screen-printing enthusiast to raise his standards and improve his technique and to make the best use of recent advances in the process, particularly the photographic reproduction of line and halftone originals and the new mechanised presses which make longer runs economical.

The book itself is an efficient piece of letterpress printing with Plastoic binding. Inset specimens of screen printing include an example of Continental wallpaper, suggesting that the possibilities of silk-screen in this field have not yet been fully exploited. A selection of abstracts of British and American press references increases the usefulness of a book which will benefit consumer and producer alike.

The advertisement pages unfortunately include lettering which is a warning of what some screen printers will do when left to themselves, without good originals to work from.

Motoring history

Horseless Carriage: the Motor-car in England, by L. T. C. ROLT, published by Constable (20*s*); reviewed by NORBERT DUTTON, FSIA

EPICYCLIC GEARS and gudgeon pins, it would probably be safe to assert, hold no absorbing interest for the average motorist; yet the history of the motor-car is almost wholly one of mechanical contrivance and development, and in recounting it Mr Rolt has not been able to avoid a certain amount of technical phraseology. But such is his capacity for imparting enthusiasm that his book is not merely accessible, but completely fascinating, to the ordinary reader. The contemporary accounts of early experiments are delightful: for example, when Trevithick's "Travelling Engine" broke down "the Parties adjourned to the Hotel, & comforted their Hearts with a Roast Goose & proper drinks, when, forgetful of the Engine, its Water boiled away, the Iron became red hot, and nothing that was combustible remained either of the Engine of the house." Mr Rolt describes the development of the steam car and its displacement, not uncontested and not, it seems, entirely unregretted, by the internal combustion engine; the gradual relaxation of restrictive legislation and the growth of restrictive taxation; the history of motor racing and its impact on design. He records the progress of motoring from the earliest times to the present day, with an evocative account of such bygone eras as the Edwardian and the 1920's; and takes, in a final chapter, a gloomy view of the future.

Mr Rolt dislikes mass production, against which he ably conducts an extremely one-sided case. It has enforced standardisation, displaced the craftsman, abandoned quality for cheapness, congested the roads, and so on. But his real grievance, one cannot help suspecting, is that it has *popularised* motoring, which is no longer an exclusive diversion for the author and a few friends. (My own sympathy with this attitude hinges entirely on whether my small sports car would be eligible to join Mr Rolt's party or banished as an agent of congestion.) He is typical of that splendid but disappearing company, a Veteran Motorist. He embraces discomfort: "it now began to rain heavily and continuously from a leaden sky so that, having no hood or screen to protect us, we were soon soaked to the skin. . . ." He welcomes arduous toil: "Nickel plate . . . tarnished rapidly if not polished but its gleaming surface not only reflected but amply rewarded the labour spent upon it. Chromium plate, on the other hand, requires little or no labour . . . but its cold, blue meretricious glitter holds little pleasure for the eye." Aesthetically he is conserva-

tive: "the proud radiator of the '20's . . .; headlamps no longer appear as lamps. . . ."

But while we may not assent to all his prejudices, we can agree that his book would be much less entertaining without them. It is completed by 29 plates, a bibliography and a comprehensive index.

Advice to authors

How to Write Technical Books by JOHN GLOAG, published by Allen and Unwin, 12*s* 6*d*; reviewed by ALEC DAVIS, editor

To the technical books which he has written on various subjects, John Gloag has now added a volume of advice for fellow-authors. Any editor or publisher who studies this book is likely to find himself wishing that all his contributors had read and studied it. Its range is wide, from the preliminary organisation of the author's material to proof-reading and the methods of reproducing illustrations.

Although its main concern is with the writers of *books*, there is much useful advice for other technical writers, especially in a chapter which deals with "Technical Documents—Papers, Reports and Memoranda." Even the writers and designers of printed forms are catered for; indeed, they are honoured with the only colour illustrations in the book.

SOME OTHER BOOKS

Rayon Fabric Construction, by A. T. C. Robinson, MSc Tech, head of the Textile Department at Halifax College of Technology, is a new book published by Thomas Skinner and Co (25*s*) It contains much useful information for the designer; indeed, as Ernest W. Goodale writes in his Foreword, the publishers have "performed a service to the trade and to the young textile designer" in issuing such a book.

The importance of technical knowledge to the designer of woven fabrics is implicit in many of the examples illustrated—most notably, perhaps, in the fabric illustrated on this page, which Mr Robinson justifiably describes as a *tour de force*. It was produced in Lyons in the 1930's and, as he says, it is difficult at first sight to imagine how such a colourful fabric could be produced by weaving. He explains that: "It has been done by checking the acetate fabric in broad bands of dull white and four vivid colours, and by placing the main flower forms in five-end satin order, so that the acetate plain cloth which forms each flower has the same colour for warp and weft. The colours of these flowers are therefore quite solid and brilliant. The smaller and more numerous flowers, which appear less vividly coloured, have their petals in warp float and their centres in weft float, or *vice versa*. They have been skilfully placed to come wholly within one band of colour. The ground is a dull viscose marocain, piece-dyed black. It would be difficult to find another ground colour which would not clash with one or other of the bright figuring colours."

Technical knowledge of a high order is required of the designer of a fabric such as this—a jacquard colour-woven double-plain rayon, reproduced from Rayon Fabric Construction, *noted above.* (*Illustration ⅔ actual size*)

Nineteenth Century Architecture in Britain, by Reginald Turnor (Batsford, 21*s*). A lively personal appraisal of Neo-Classical and Neo-Gothic. The illustrations are well chosen and representative.

Vacuum, a review of developments in vacuum research and engineering, is a new quarterly journal published by W. Edwards and Co (London) Ltd; subscription £1 5*s* or $4.20.

Meat Packaging and Processing, report by the Productivity Team visiting U.S.A. in 1950 (Anglo-American Council on Productivity, 4*s*). This account of American methods in the meat industry includes a note on the pre-packing of bacon, sausages and fresh cut meat for self-service stores.

Rigid Boxes and Cartons (2*s*) is another Productivity Report. It does not deal with package design, nor with packaging from the user's viewpoint, but from the boxmaker's. It recommends that the trade in Britain should be enabled to buy certain types of American plant.

MANUFACTURERS' PUBLICATIONS

Aluminium in Road Transport is a new publication of the Northern Aluminium Co Ltd, Banbury, Oxfordshire. Generously illustrated with drawings and photographs illustrating production processes, as well as photographs of finished products, it is a model of what such a booklet should be.

An unusual feature is the acknowledgment, in the imprint, of the designer of the booklet (Oswald Seddon) as well as the printers (Cheney and Sons, Banbury).

Veneering Warerite Plastics is the first of a series of booklets, under the general heading of "Fabrication Instructions," which are being published by Warerite Ltd, Ware, Herts. It consists of 12 pages and includes diagrams.

Beetle Moulding Powders, 72 pp, Spirax-bound, has useful sections on moulding technique and finishing processes, as well as tables. Beetle Products Co Ltd, 1 Argyll Street, W1.

1951 ALABAMA INSTITUTE

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Designing a streamlined motor-cycle

SIR: With reference to J. C. Rice's letter, "Car on two wheels," in your February issue, the following facts may be of interest:

In 1941 the Blackburn and General Aircraft Company also became engaged on the design calculations for a two-wheel vehicle with outriggers to prevent over-balancing at low speed. This was in connection with the development of a streamlined shell for N. B. Pope's attempt on the world's motor-cycle speed record.

The existing record of 174 m.p.h. was achieved in 1937 by a German, Ernst Henng, on a streamlined motor-cycle. In order to surpass this figure it was essential that Mr Pope's Brough Superior motor-cycle should have the full benefit of this Company's aerodynamic knowledge.

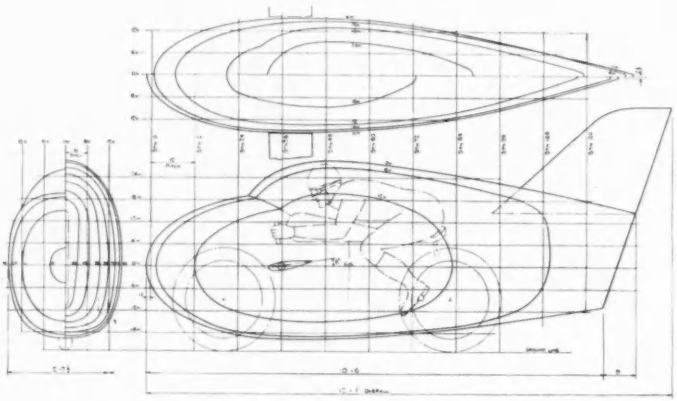
The rider was crouched over the petrol tank inside a streamlined shell which had two small retractable wheels for use when starting or stopping. A fin at the rear was intended to give directional stability and stub wings below the handlebars controlled the tyre loading on the front wheel by virtue of their variable incidence.

The necessary theoretical calculations, which were confirmed by wind tunnel tests, gave a maximum speed of 207 m.p.h.—more than 50 m.p.h. in excess of the unstreamlined machine.

Unfortunately these theories could not be confirmed in action, for in September 1949, whilst travelling at slightly over 100 m.p.h., a side gust of wind blew the machine over (fortunately Mr Pope escaped with bruises). The fin's susceptibility to side-winds was always the biggest danger. As this attempt, at the Bonneville Salt Flats, Utah, had already cost £10,000, the project had to be abandoned.

Some day it is hoped that this world record will return to Britain and we are confident that our design is capable of producing over 200 m.p.h. As so often occurs with record attempts, finance is the greatest obstacle to be surmounted.

M. G. K. BYRNE,
Publicity Manager,
Blackburn and General Aircraft Ltd, Brough, Yorks



Motor-cycle with enclosed body—a design intended for speed rather than comfort, unlike the Czechoslovakian "car on two wheels" illustrated in DESIGN *for February, which prompted the Blackburn Company's letter, above*

Textile design policy

SIR: I am anxious to obtain a little more information regarding the account of increased sales due to a design policy (DESIGN No 25, p 18).

Two designs are shown which, I recall, appeared in the Rayon Design Centre's quarterly publication. One would assume rightly or wrongly from the article that such designs as shown are responsible for the increase in sales.

My information from many sources leads me to the conclusion that the world-wide scarcity of textiles has made sales increase in practically every concern that can get the raw material to convert; most firms find they can spend less on design, owing to these conditions, and yet their sales increase.

I do not think they would claim that this sales increase was due to an enlightened policy but rather to a set of abnormal circumstances allowing everything that is woven and processed to be sold.

If it is claimed that the two examples of what is said to be contemporary art are the reasons why the sales have increased I should despair for the future of design. . . .

My fears are that we are being sadly misguided by such work; if this is the standard for the future then our taste is sadly declining and it will require another William Morris to stimulate our thoughts to craftsmanship in design, and not attempts to foist off grotesque shapes and poor colourings as the latest and best contributions to textile design.

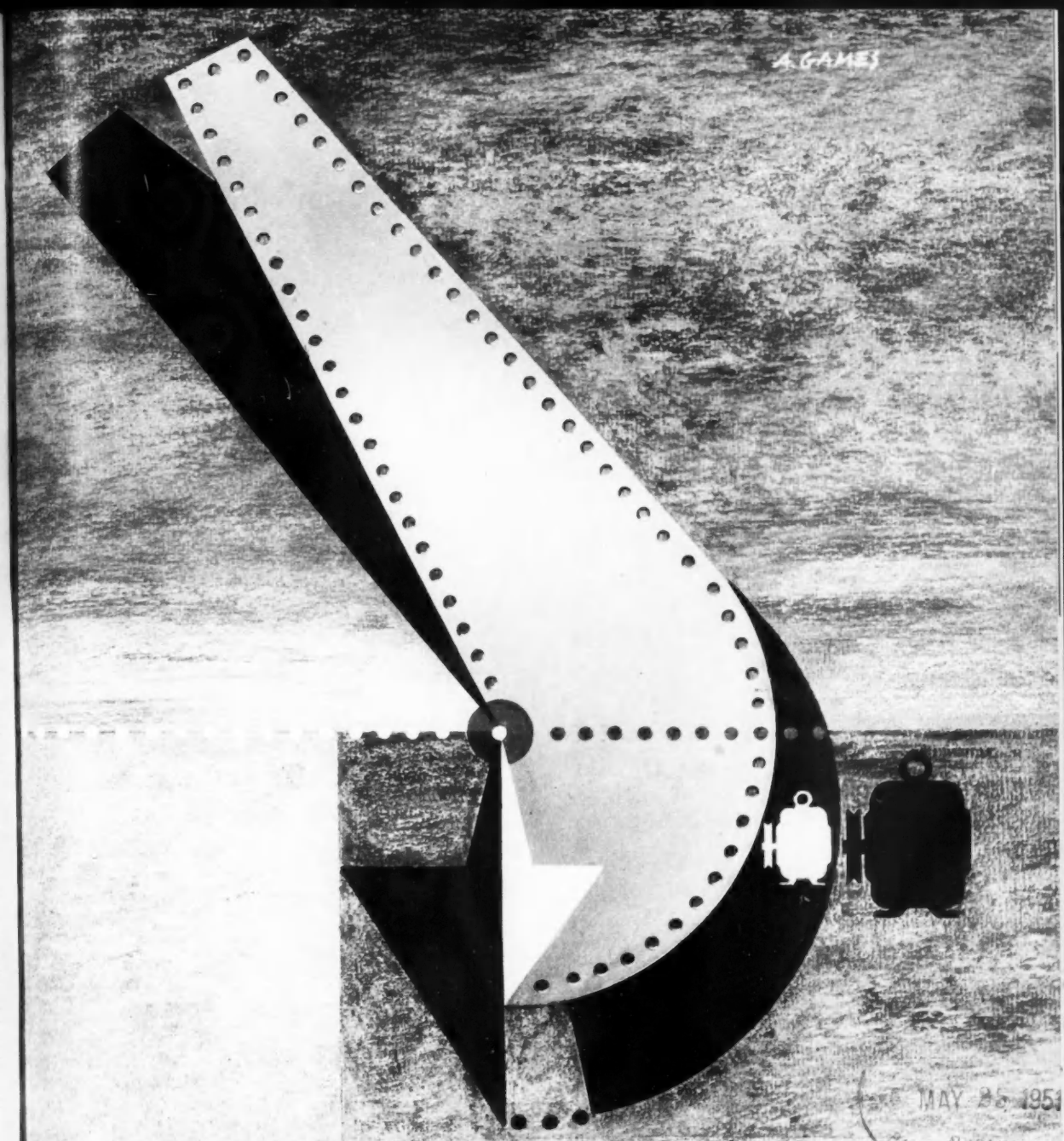
I would also strongly dispute the idea that an outside designer need not know much about technical requirements. The more a designer knows of those limitations and can design within them, the better the design.

Suppose the same was said of an engineering designer. The result would be disastrous because failures would take place without limit. So also with the textile designer; he too must be fully trained, and I think we have yet to realise just how much training he ought to have. Otherwise, if that statement stands about designs, then just anybody is a designer. . . .

R. H. WRIGHT, FTI, AMIED, FRSA,
Gatley, Cheshire

SIR: I was interested to note the remarks expressed in the article, "Home Sales Up, Exports Doubled" in DESIGN (No 25) regarding French designers. It is true that many manufacturers buy a large proportion of their designs from Paris, but it is also true that many of them go to Paris themselves to buy sketches. The statement that the British designer "sits at home" is, in my

continued on p 31



MAY 26 1951
ALABAMA
POLYTECHNIC INSTITU

In bascule bridges aluminium can cut dead weight by 60%. Power consumption is less. Load on foundations and tail end proportions are reduced. Larger units can be erected at the site.

THE BRITISH ALUMINIUM Co Ltd

b a

SALISBURY HOUSE LONDON EC2

MAY 25 1951
ALABAMA
POLYTECHNIC

Note the thick cross-section of the walls of the case, the neat hingeing of the lid, the fine surface finish. Metal bars are magnetised to prevent movement of the flies. A small spring clip is riveted in the front to provide a firm closure.

Fishermen require fine tackle and Milwards of Redditch make it. So when this well-known firm decided to market a new fly case, their first concern was for quality. The result is this neat container designed by Roanoid Plastics Ltd. and moulded by them from Beetle moulding powder.

As with all containers moulded from Beetle, the case provides essential rigidity and strength. It is good to look at and has a pleasing surface texture. It has pure colour, for, above all, it is in their colour possibilities that Beetle and Scarab excel.

It is said that fishermen are fussy about their gear; no less so are housewives and husbands, smokers and shavers, cosmetic users and confectionery consumers. They know a good product by the quality of the container it is packed in. Appearance counts for more than ever when money is tight. So if sales are your business let us tell you more about the possibilities of containers made from

B·I·P GROUP

BEETLE AND SCARAB

AMINOPLASTIC MOULDING POWDERS

Distributed by **THE BEETLE PRODUCTS CO. LTD.** *1 Argyll Street, London, W.1*

BEETLE and SCARAB are trade marks registered in Great Britain and in most countries of the world.

continued from p 28

experience as a textile designer, incorrect. My clients seldom come to see me—I always visit them, and unlike my French counterpart, I am always available for consultation. I think this is true of the majority of British textile designers.

MRS D. GARTSIDE,
Doreen Miller (Designs),
Manchester 10

We understand that the designs to which Mr Wright takes exception (p 28) are selling well, but it is surely improbable that any *two* patterns would markedly affect the total sales of a textile firm with a £6,000,000 yearly turnover spread over many lines.

As for "the idea that an outside designer need not know much about technical requirements," conditions vary from one firm to another; Whitehead's are able to use outside designs, selected for the designer's freshness of approach rather than his technical knowledge, *because they have their own competent design staff* to prepare the designs for mass production.

To Mrs Gartside we would point out that the stay-at-home tendency on which Whitehead's commented was not attributed to British textile designers generally but to "designers . . . in London." EDITOR

Status—in Britain and America

SIR: As a member of the Specialist Team on Packaging that recently visited the USA, I read with interest the letter in your February issue from Mr Norbert Dutton, FSIA. Mr Dutton has already been informed that one of the members of the Team was, in fact, a designer. The members of the Team were drawn from representative sections of the packaging industry, covering the principal materials and processes used in this country; but, when assembled, we all to a certain extent discarded our industrial identity and worked as a Team, each in a field to which he was most suited, and in which our sponsors considered we were capable of assessing American products.

While Mr Dutton presumes wrongly that no designer was present, he also infers, again wrongly, that other members were salesmen and accountants. It is true that the Team was not constituted originally with the idea that a designer should be a member, but as its formation progressed, it was obvious that one was necessary, and a Director of the British Xylonite Co Ltd stood down in order that the representative of the plastics industry could be a person engaged in the design profession.

In reading Mr Dutton's letter, one has the feeling that he considers the American designer may have ability in excess of that which we find among British designers. I often find this belief among industrialists in this country; surely we must do all in our power to refute it.

In the "Packaging Design" section of the Productivity Report on Packaging, we do not indicate, in any way, that American designs have any aesthetic qualities which are not common to British packages. Indeed, when the Team carefully examined the samples collected during the visit, in order to decide which of them should be illustrated in the Report, it was found that, good as they were, they did not possess any qualities which could not be found in the best British packages.

Moreover, to evaluate American packaging, one should not set out to compare it with the package used on the British home market. The difference is not in the quality of design but in the application of good design to different marketing methods dictated by the environment and standard of living of Americans.

I was pleased that Mr Dutton quoted a short extract from the Report which I had hoped would be noticed by designers. It refers to the two-way exchange of confidence existing in American industry, between the designer and the company by whom he is employed. It is to be regretted that this does not always exist in Great Britain: the reason perhaps is not difficult to find. It is not sufficient to say that the salesman, accountant, etc, is not qualified to judge the aesthetic appearance of an object (moreover, he objects to being told as much). Surely the customer is the judge—and in the Report, the customer is America. It is by the appeal of our products in the United States that we shall earn the dollars we so badly need.

W. A. G. PUGH,
Designer, Cascelloid Division,
The British Xylonite Co Ltd,
Leicester

Press Button B

SIR: I was interested in your account (DESIGN, No 25), of a new type of Swiss kiosk telephone instrument.

In this description the writer comments on the merit of having no button B, and in this connection I would like to point out that my Company manufacture coin box telephones having no B button, as well as a type without either A or B button. . . .

Also, in fairness to the British Post Office, who at present prefer the A and B button type, I should mention that eliminating the B button has disadvantages from the user's point of view, such as the loss of the calling fee when the caller obtains the wrong number. With the British and other types of box having the B button, the caller can regain the whole fee after the called party has replied. . . . With the buttonless type this is not possible.

H. J. BUTLER,
Chief Engineer,
Hall Telephone Accessories Ltd,
London NW10

Subtlety in furniture design

SIR: In my letter in last December's DESIGN I did not intend to disparage utility furniture—only to indicate how universal it is becoming. . . .

I readily accepted Mr Brasted's invitation (DESIGN, February) to visit the furniture factory of George M. Hammer and Co Ltd, and I have been over several others in the past two years. In all of them I noticed a common technique for mass production which to the outsider appeared very efficient. But the "freedom of design" now permitted has resulted in many differing standards of design, some of which are low.

Most of your readers will agree, however, that there is a revival of good furniture design. . . . I have gained the impression that those manufacturers who work in closest touch with good modern shops or with outside designers are the most successful; and that to design furniture within the utility price and still retain any subtlety of form calls for the very highest skill.

LESSLIE K. WATSON,
MBE, TD, MA, FRIBA, AMTPI,
London WC1

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ALABAMA POLYTECHNIC INSTITUTE

Lists of Festival exhibits

Lists of the items of furniture and household equipment to be shown in the South Bank Exhibition, compiled from the Festival catalogue, are available from the Retail Section, Council of Industrial Design, Tilbury House, Petty France, London SW1. The price is 1*s* 3*d* post free for each list, and the eight lists at present available are: Furniture; Furnishing Fabrics; Floor Coverings; Wall Coverings; Hardware; Glassware; China; Gas and Electrical Domestic Equipment. Others will be issued later.

METHODS AND MATERIALS

The beginning of the finish

NOT ONLY THE appearance, but also the serviceability of any article is affected by its finish; and the finish is dependent on the surface beneath the finish. The painting of non-ferrous metals and plastics has always been a problem because of their smooth surfaces, which offer no adhesion unless they are scoured or etched with an abrasive, chemically etched before priming, or treated with a combined etch and primer.

This last method is now widely used, as chemically active paints for priming metal surfaces have been known for some time. They have, however, suffered from the disadvantage that they have not been available in ready-mixed form; because of chemical action between the etching acid and the varnish medium in the paint, it has in the past been necessary to supply them in separate containers. They then had to be used within a few hours of mixing.

A new etch-primer, Strathclyde, overcomes this disadvantage by the use of a new formula which allows the etching and varnish mediums to be supplied ready for use in a single container. The makers (Federated Paints Ltd, an amalgamation of three Glasgow paint manufacturers) state that this substance can be stored for many months without risk of deterioration.

The new primer has the appearance of a lightly pigmented green paint. As with any type of etch-primer, it is essential that the surface should be clean and free of grease before it is applied.

Certain manufacturers of aluminium sheet are now supplying ready-primed sheets for users who require them.

Printing on drums

A LITHOGRAPHIC PRESS, for printing large steel drums with the same degree of precision as is customary in small-scale metal boxmaking, has been built by R. Hoe and Co Inc, New York. The largest size it can handle is a 50 by 72in. sheet of 18-gauge steel, which is used to form a 55-gallon barrel.

As in normal tin-printing, the process used is offset lithography and standard lithographic inks are employed. It seems unlikely that such presses will be built in Great Britain; A. Southway, Director of Hoe's British associate company, R. Hoe and Crabtree Ltd, states that there is little or no demand for lithographed drums here, and that the firm's manufacturing capacity "at present is so overwhelmed with orders as to prevent our taking on any such new work."

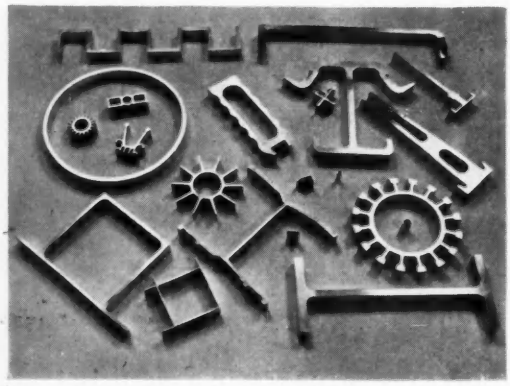
Disappearing transfers

INFORMATIVE LABELLING of dressed chickens, by the use of transfers, is noted in a report from Chicago by the Lithography Productivity Team now visiting the United States. The transfers, made by the Meyercord Co, are said to "disappear during cooking, after having provided the purchaser with a guarantee of age and edibility."

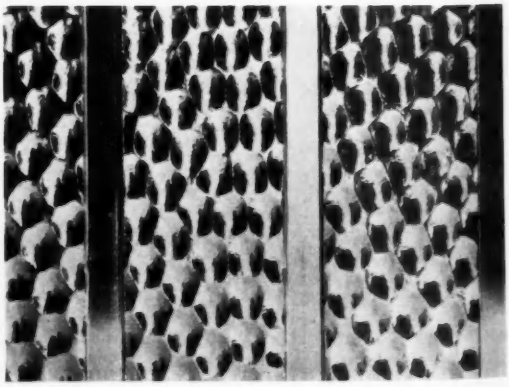
Figured glass

TWO MORE PATTERNS have been added by Pilkington Brothers Ltd to their range of cathedral and figured rolled glass. These are based on existing patterns, *No 3 Hammered* and *Pin-head Morocco*, and in each case a stripe is superimposed; the new patterns are known as *Hammerstripe* and *Pinstripe* respectively. The diffuse light transmission for each is 82 per cent; this is but little affected by the alteration in the pattern.

Pilkingtons state that "although the parent glasses fall into the non-formal group . . . the superimposition of the stripe alters these glasses fundamentally and brings them both into the formal group."



The group of components above suggests the wide range of extruded shapes which can now be produced in aluminium alloys. These are made by Northern Aluminium Co Ltd, one of whose recent technical publications is noted on page 27 as "a model of what such a booklet should be"



Hammerstripe, *one of the new figured rolled glasses by Pilkington Brothers (referred to in column 3 above) is illustrated above. It is a variation of an earlier pattern,* No 3 Hammered, *formed by superimposing a broad stripe. The other new design,* Pinstripe, *is a smaller pattern*

WHO WOULD DARE...

To the question on page 23, this is the answer

THE FURNITURE illustrated was designed by Basil Spence, OBE, FRIBA, FRIAS, for the Scottish Furniture Manufacturers' Association, by whom it was presented to the Furniture Development Council for the Council's house in the Adelphi, London, where the Adam Brothers once lived.

Desk for the Chairman of the Furniture Development Council

That contemporary furniture need not look out of place in an eighteenth-century room is made evident by these pictures. In the Council Room, where the blue and white ceiling design is the main point of interest, it was necessary that the use of detail in the furnishing or decoration should be sparing.

Taking this into account—together with the fact that the room is not over-large—the design was kept as light as possible; the furniture is simple and unobtrusive. The wood used is natural mahogany with a clear polish. Both table and chairs are lighter than those usually found in board rooms. The construction of the chairs and table is described on small metal plates that cover the joints and form part of the decoration.

The Council Chamber was once a room in the Adam Brothers' own house

The hub of production is the drawing office

Not many years ago the drawing office was generally considered a necessary evil, and was housed in unsuitable rooms grudgingly maintained and scantily equipped.

Today, however, it is realised that the output of the works is dependent on the output of the drawing office, and that the draughtsmen deserve to be equipped to enable them to work with maximum efficiency.

For over 50 years we have specialised in the design and manufacture of drawing office equipment and materials of all types, and have contributed towards the better conditions and improved methods of the modern drawing office.

Hall Harding Ltd · STOURTON HOUSE · DACRE ST · L[illegible]

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MAY 25 1951

ALABAMA POLYTECHNIC INSTITUTE

MAY 25
POLY

Notebook

BECAUSE EVERY INDUSTRY uses printing, the Productivity Team Report on *Letterpress Printing* is likely to interest more people than most other reports in this series. It suggests that the general quality of printing in America is not so high as in Britain, but the design of American printed matter is better; and to this the Team adds the further comment—cynical, perhaps, but none the less true—that: *The impact of design is immediate, whereas quality of printing, unless it is outstandingly bad, is only revealed by examination.*

This quotation comes from a section of the Report headed "Design," which might well have been headed "Artwork." Design, in a fuller sense, is discussed in a section called "Planning for production." Here we read that the production of printed matter is regarded, in the most efficient American works, as an engineering problem; there is a planning department which decides on methods of production and considers, "in relation to one another, . . . such matters as paper, ink, block screens, type faces. . . ." Whether this system produces well-designed printing or not must depend entirely on the sort of people who work in the planning department.

One recommendation by the Team, which is not likely to go unchallenged, is that British printers should make more use of slug composition, as distinct from single-type composition, on the grounds that cost is lower, output higher, and "the advantages of slug composition for ease of handling and making-up are well known."

Letterpress Printing costs 2*s* 6*d* from the Anglo-American Council on Productivity, 21 Tothill Street, London SW1.

Bursary winners

Successes of the LCC Central School of Arts and Crafts are again notable in the RSA's annual Industrial Art Bursaries competition. Central School students won bursaries in the domestic solid-fuel-burning appliances section—for the fourth year running; in the dress textiles section, the electric-light fittings section, and in a newly established section for domestic electrical appliances.

The opening of the solid-fuel appliance section to young people in the industry, as well as students, again justified itself, one draughtsman winning a bursary and another being commended in this section.

Space does not permit a list of all the schools participating, but this information, together with illustrations and the juries' reports, can be found in a booklet obtainable (free) from the Royal Society of Arts, John Adam Street, Adelphi WC2. The booklet also includes 16 pages of extracts from reports submitted by recent bursary winners, which suggest that they have made good use of their opportunities to travel abroad.

Mass-Observation

"Above all it became clear that *what most people want is simplicity and neatness of design.*" This quotation from *Mass-Observation Bulletin* No 40 * sums up the results of a design quiz in which 250 Londoners were questioned by members of Mass-Observation. They were shown examples of different styles of design in the form of photographs, all taken from the Council of Industrial Design's Photographic Library and all regarded as good of their kind. The objects illustrated were clocks, chairs, cups and saucers, radio sets and bus shelters. The comments are analysed at some length in the *Bulletin*—indeed, at such length and in such great detail that we felt rather less sure of the conclusions reached, after reading them all, than we did after reading the sentence quoted.

* Jan–Feb 1951, Mass-Observation Ltd, 7 Kensington Church Court, London W8 (3*s* 8*d*)

Furniture design reviewed

The *Architectural Review* has put all students of contemporary furniture design in its debt by devoting 17 pages of its March 1951 issue to "Furniture since the War." The subject is profusely illustrated and the illustrations have long informative captions to supplement the six pages of text, written by H. McG. Dunnett.

Those who are inclined to think that every other country's furniture is more progressive in design than their own can well take note of Mr Dunnett's opening remarks that the facts are otherwise than they might appear from "the fascinating pages of *Domus*, the glamorous photography of *Interiors*. . . . No country is, or ever has been, a happy hunting ground for the contemporary designer."

Tailpiece

From a classified advertisement in a Birmingham evening paper—reminding us of Wordsworth's "battles long ago":

> Dennis's magnificent pre-war William and Mary walnut Bed Room Suite. . . .

"TREATMENT." *St Pancras is the first station in the London Midland Region to be wholly re-signposted in accordance with British Railways' new standards. The signs have white Gill Sans letters on a maroon ground. The approach to the station from Pancras Road is shown here before and after "treatment" (British Railways' word for it). The enamelled plates are by Mead, McLean and Co Ltd; boards by Sturgeon Signs*

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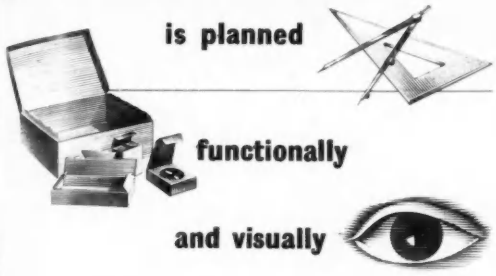

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Did fill the papers, front and back,
All cagey were the shopping queues,
And the gross sales grew slack.

"Beware the Bottleneck, my son!
The stocks that grow, the sales that shrink,
Beware the Vicious Circle, Come!
Start furiously to think."

His Lithembos he took in hand,
A seal on every pack he stuck,
A glowing jewel, each seal looked grand.
—'Twas knowledge, not just luck.

One, two! One, two! and through & through
Each store the news was quickly told.
They take the eye! They touch the heart!
They look as good as gold!

'Twas Britain and the battlenews
Was still as war-like, still unsure,
But smiling were the shopping queues—
Eye pleased—they asked for more!

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Festival of Britain

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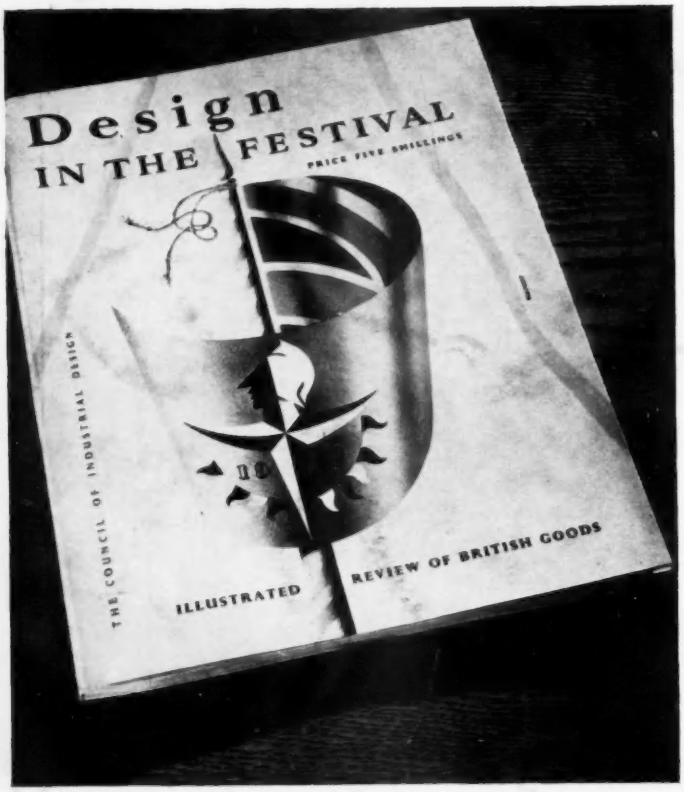

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